Instructional Materials Evaluation Criteria (name and grade of the core document used to align)

__Algebra 1_____

Title __*Algebra 1* © 2008_____   ISBN# ___978-0-07-873822-7_____

Publisher: ___Glencoe McGraw-Hill_____

Name of Person conducting alignment: __not available_____

Overall percentage of coverage of the Utah State Core Curriculum: __100%__

Standard I: Students will acquire number sense and perform operations with real numbers.

Percentage of coverage for Standard I: 100%

Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
Objective 1: Compute fluently and make reasonable estimates with rational and irrational numbers.	a. Simplify and add, subtract, multiply, and divide square roots.	**Student Edition:** 528-534, 536-540, 541-546, 549-554, 555-559 *Graphing Calculator Lab* 535, 543 **Teacher Wraparound Edition:** A 534; F 537; I 529	
	b. Evaluate and simplify numerical expressions containing rational numbers and square roots using the order of operations.	**Student Edition:** 10-14, 21-25, 26-31, 528-534, 536-540, 541-546 **Teacher Wraparound Edition:** F 11, SM 12	
	c. Compute solutions to problems and determine the reasonableness of an answer by relating them to the problem.	**Student Edition:** 78-84, 85-90, 92-97 #43, 98-103, 105-110, 111-115, 122-128, 264 #28, 283 #18, 312 #36, 592 #23 *Algebra Lab* 77, 91 *Reading Mathematics* 116	

	Indicators	If covered, appropriate page #'s	Comments on coverage
	d. Relate properties and operations of rational numbers to those used with irrational numbers.	**Student Edition:** 528-534, 536-540 *Graphing Calculator Lab* 535	
Objective 2: Classify, compare, and order rational numbers and expressions with square roots with and without a number line.	a. Classify numbers as rational or irrational.	**Student Edition:** 46-52 **Teacher Wraparound Edition:** I 47	
	b. Order and compare rational and irrational numbers.	**Student Edition:** 46-52 **Teacher Wraparound Edition:** A 52, I 47	
	c. Represent real numbers, including those with square roots, in a variety of ways.	**Student Edition:** 46-52, 84 #55-#56, 111-116, 370 Ex 5, 528-534, 536-540, 549-554, 555-559 *Graphing Calculator Lab* 535 *Prerequisite Skills* 706-707 *Reading Mathematics* 116	
	d. Solve problems and represent answers using exact values.	**Student Edition:** 78-84, 85-90, 92-97, 98-103, 109 #29, 122-128, 260-265, 266-270, 272-278, 370 Ex 5, 528-534, 536-540, 541-546	

Standard II: Students will represent, analyze, and solve linear expressions, equations, and inequalities.

Percentage of coverage for Standard II: 100%

Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
Objective 1: Model and interpret problems having a constant rate of change using linear functions.	a. Write algebraic expressions or equations to generalize visual patterns, numerical patterns, relations, data sets, or scatter plots.	**Student Edition:** 143-148, 149-154, 164-170, 172-176, 187-195, 213-218, 220-225, 227-233, 236-241 *Algebra Lab* 142, 186, 228 *Graphing Calculator Lab* 234-235, 515-516 *Reading Mathematics* 171	

	b. Represent linear equations in slope-intercept form, $y = mx + b$, and standard form, $Ax + By = C$.	**Student Edition:** 204-209, 213-218, 220-225, 227-234, 236-241 *Graphing Calculator Lab* 203	
	c. Distinguish between linear and non-linear functions by examining a table, equation, or graph.	**Student Edition:** 155-161, 471-477	`
	d. Interpret the slope of a linear function as a rate of change in real-world situations.	**Student Edition:** 187-195, 196-202 *Algebra Lab* 186	
	e. Model rates of change using direct variation.	**Student Edition:** 196-202 *Graphing Calculator Lab* 197	
Objective 2: Represent and analyze linear relationships using algebraic equations, expressions, and graphs.	a. Write the equation of a line when given: • Two points. • The slope and a point on the line. • The graph of a line.	**Student Edition:** 172-176, 204-209, 213-218, 220-225, 227-233, 236-241 *Algebra Lab* 228, 237 *Graphing Calculator Lab* 234-235 **Teacher Wraparound Edition:** A 225; Pre-Ap 215, 225	
	b. Identify the x- and y-intercepts from an equation or graph of a line or a table of values.	**Student Edition:** 155-161, 204-209 *Graphing Calculator Lab* 210-211	
	c. Graph linear relations and inequalities. • By plotting points. • By finding x- and y-intercepts. • Using the slope and any point on the line.	**Student Edition:** 155-161, 172-176, 187-195, 196-202, 204-209, 213-218, 334-339 *Algebra Lab* 186 *Graphing Calculator Lab* 197, 203, 210-211, 340	`

Objective 3: Represent and analyze the slope of a line.	a. Identify the slope of a line when given points, a graph, or an equation.	**Student Edition:** 187-195, 196-202, 204-209, 213-218, 220-225, 227-233, 236-241 *Algebra Lab* 186 *Graphing Calculator Lab* 203	
	b. Identify horizontal and vertical lines given the equations or slopes.	**Student Edition:** 155-161, 187-195 **Teacher Wraparound Edition:** Pre-Ap 215	
	c. Determine the effect of changes in slope or y-intercept in $y = mx + b$.	**Student Edition:** 196-202, 204-209 *Graphing Calculator Lab* 162, 197, 210-211	
	d. Determine and explain the meaning of slopes and intercepts using real-world examples.	**Student Edition:** 155-161 Ex 2, Ex 3, #11, #37	
Objective 4: Solve and interpret linear equations and inequalities and systems of two linear equations.	a. Solve multi-step, single variable, linear equations and inequalities algebraically and graphically.	**Student Edition:** 78-84, 85-90, 92-97, 98-103, 105-110, 111-116, 122-128, 294-299, 301-307, 308-313, 315-320 *Algebra Lab* 77, 91, 300 *Graphing Calculator Lab* 309 *Spreadsheet Lab* 129	
	b. Solve real-world problems involving constant rates of change.	**Student Edition:** 122-128, 165-170, 172-176, 187-195, 196-202 *Algebra Lab* 186 *Spreadsheet Lab* 129	
	c. Solve linear formulas and literal equations for a specified variable.	**Student Edition:** 117-121 **Teacher Wraparound Edition:** Pre-Ap 121	
	d. Solve proportions that include algebraic first-degree expressions.	**Student Edition:** 105-110, 111-115, 626-632	

Objective 5: Solve and interpret pairs of linear equations and inequalities.	a. Solve systems of two linear equations graphically and algebraically with and without technology.	**Student Edition:** 253-258, 260-265, 266-270, 272-278, 280-284 *Algebra Lab* 260 *Graphing Calculator Lab* 259 *Reading Mathematics* 279 *Spreadsheet Lab* 252 **Teacher Wraparound Edition:** F 262; Pre-Ap 254, 270	
	b. Determine the number of possible solutions for a system of two linear equations.	**Student Edition:** 253-258 **Teacher Wraparound Edition:** Pre-Ap 254	
	c. Graph a system of linear inequalities and identify the solution.	**Student Edition:** 341-345 *Graphing Calculator Lab* 342	

Standard III: Students will represent and analyze mathematical situations and properties using patterns, relations, functions, and algebraic symbols.

Percentage of coverage for Standard III: 100%

Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
Objective 1: Simplify polynomials and the quotient of monomials.	a. Simplify and evaluate monomial expressions, formulas, and equations.	**Student Edition:** 117-121, 358-364, 366-373 *Algebra Lab* 365 *Graphing Calculator Lab* 367 **Teacher Wraparound Edition:** Pre-AP 363	
	b. Add and subtract polynomials.	**Student Edition:** 384-388 *Algebra Lab* 382-383	
	c. Multiply monomials by a polynomial.	**Student Edition:** 390-395	`
	d. Multiply binomials using various methods including the distributive property, area models, and special products.	**Student Edition:** 398-403, 404-409 *Algebra Lab* 396 **Teacher Wraparound Edition:** I 399, 405	

		Student Edition:	
	e. Simplify the quotient of monomials.	**Student Edition:** 366-373 *Graphing Calculator Lab* 367	
Objective 2: Represent polynomials as the product of a monomial and polynomial or as the product of two first degree single-variable binomials.	a. Find the greatest common monomial factor of a second or third degree polynomial.	**Student Edition:** 420-424	
	b. Factor trinomials of the form $ax^2 + bx + c$ when a = 1.	**Student Edition:** 426-431, 434-439 *Algebra Lab* 425, 432-433 **Teacher Wraparound Edition:** Pre-AP 436	
	c. Recognize the difference of two squares and perfect squares of binomials.	**Student Edition:** 447-452, 454-460 *Algebra Lab* 447	`
Objective 3: Solve quadratic equations using inverse properties and factoring.	a. Solve quadratic equations that can be simplified to the form $x^2 = a$ where $a \geq 0$ using inverse properties.	**Student Edition:** 541-546, 549-554, 555-559 *Graphing Calculator Lab* 543	
	b. Solve quadratic equations using factoring.	**Student Edition:** 426-431, 434-439, 441-446, 447-452, 454-460	
	c. Write a quadratic equation when given the solutions.	**Teacher Wraparound Edition:** Pre-AP 446	
Objective 4: Solve problems using the Pythagorean Theorem.	a. Illustrate why the Pythagorean Theorem is valid using a variety of methods.	The lesson found on pages 549-554 could be integrated to meet this objective. **Student Edition:** 554 #49, #50	
	b. Solve problems using the Pythagorean Theorem.	**Student Edition:** 549-554	

Standard V: Students will apply concepts and methods from statistics to solve real problems.

Percentage of coverage for Standard V: 100%

Objectives	Indicators	If covered, appropriate page #'s	Comments on coverage
Objective 1: Summarize, display, and analyze bivariate data.	a. Collect, record, organize, and display a set of data with at least two variables.	**Student Edition:** *Algebra Lab* 142, 186, 228 *Graphing Calculator Lab* 203, 470 *Prerequisite Skills* 713, 714-715	
	b. Determine whether the relationship between two variables is approximately linear or non-linear by examination of a scatter plot.	**Student Edition:** 155-161 *Algebra Lab* 142, 186, 228 *Graphing Calculator Lab* 203, 470	
	c. Characterize the relationship between two linear related variables as having positive, negative, or approximately zero correlation.	**Student Edition:** 227-233 *Graphing Calculator Lab* 234-235	`
Objective 2: Estimate, interpret, and use lines fit to bivariate data.	a. Informally estimate the equation of a line of best fit to make and test conjectures.	**Student Edition:** 227-233 *Algebra Lab* 228 *Graphing Calculator Lab* 234-235	
	b. Interpret the slope and *y*-intercept of a line through data.	**Student Edition:** 227-233 *Algebra Lab* 228 *Graphing Calculator Lab* 234-235	
	c. Predict *y*-values for given *x*-values when appropriate using a line fitted to bivariate numerical data.	**Student Edition:** 227-233 *Algebra Lab* 228 *Graphing Calculator Lab* 234-235 *Reading Mathematics* 226	